INTEROPERABILITY

New Messaging Standard May Overtake X.400

X.400 has always been the quintessential example of the application that would make Open Systems Interconnection work. If you complain about the Session Layer, for example, somebody will invariably respond, "Yes, but we get X.400."

What's so good about X.400? Well, it has features. You might say it is feature-rich, with a message attribute for every need. Some of these features sound useful, but in practice it has been hard to take the complexity of X.400 and turn it into message switches that perform well or user interfaces that people really want to use.

Remember the 1984 version of X.400? X.400 has been around for a long time, but this venerable protocol just hasn't caught on. People, though, caught on quickly. MCI Mail, CompuServe, Minitel, the Unix to Unix Copy Program, the Simple Mail Transfer Protocol, Digital Equipment Corp.'s Message Router, and even Novell Inc.'s MHS provide viable alternatives to X.400.

One of the big features of X.400 has been support for a message's multiple body parts (at least in the specifications, that is). In reality, though, the specification for body parts in X.400 is so vague that interoperability is virtual at best.

Recently, the Internet community decided to add support for multiple body parts and different formats of data to the venerable Request For Comments 822, the document that describes the format of mail messages in the Internet. (The companion SMTP handles the transfer of the messages.) The effort is known as the Multipurpose Internet Mail Extensions.

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It didn't take the Internet Engineering Task Force 10 years to define and deploy MIME. In fact, the work was pretty much done inside of a year.

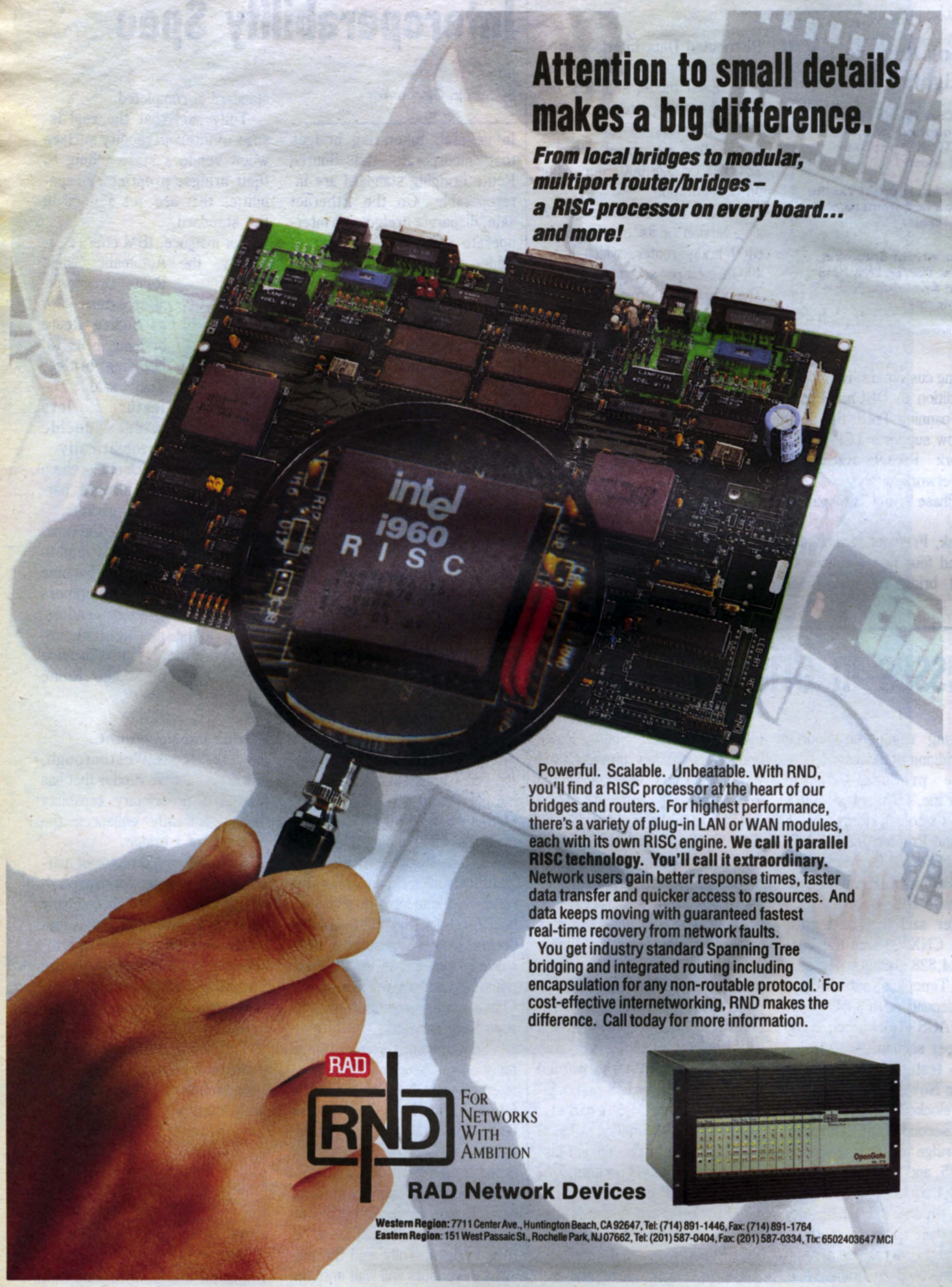
First the task force defined a message format that allows multiple body parts. Within those body parts, the IETF defined the format for a dozen useful types such as audio, plain text, rich text, fax and other graphic images, and binary. Support for multiple character sets means that people can write messages that look right (there's nothing worse than reading French without the accents).

The next task was to patch together common mail-reading programs. A group of people got together and patched existing systems, adding MIME support to mail readers such as Berkeley mail, mh, Mailtool, Emacs Rmail,Emacs, Andrew, and many others. If your mail handler isn't on the list, a fairly simple patch will usually do the trick. Other vendors are busy writing native MIME implementations.

At last count, there were at least 20 MIME implementations finished or under way. Bell Communications Research Inc., for example, has placed Nathaniel Bornstein's implementation, Metamail, into the public domain, encouraging unlimited use on the Internet. (Use Anonymous FTP into thumper.bellcore.com to get the software.)

MIME solves an immediate need, giving a huge base of existing users access to multimedia messaging. It is a case study of how to do standards successfully. MIME may very well quickly overtake X.400 as the glue that binds the messaging world together. ■

CARL MALAMUD is writing Exploring the Internet: A Technical Travelogue, *a book that will be featured as The Interop Book at Interop '92 Fall. The opinions expressed are his own.*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